

RIVERS AND CAPITALS

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Grade Levels: 9-12

Purpose: To show a relationship between rivers/bodies of water and capital cities.

National Geography Standards:

Standard 1: How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information for a spatial perspective. *Standard 2:* How to use mental maps to organize information about people, places, and environments in spatial context.

Standard 3: How to analyze the spatial organization of people, places, and environments on Earth's surface.

Standard 9: The characteristics, distribution, and migration of human populations on Earth's surface

Standard 15: How physical systems affect human systems

Indiana Social Studies Academic Standards:

World Geography

Standard 1: Students will use maps, globes, atlases, and grid-referenced technologies such as remote sensing, Geographic Information Systems (GIS), and Global Positioning Systems (GPS) to acquire and process information about people, places, and environments.

Standard 2: Students will acquire a place-location framework for thinking geographically. They will identify the physical and human characteristics of places. They will understand that people create regions to interpret Earth's complexity and that culture and experience influence people's perception of places and regions.

Standard 4: Students will identify and analyze the human activities that shape the Earth's surface, including population numbers, distribution and growth rates, rural and urban land use, ways of making a living, culture patterns, and economic and political systems. Using grid-based technology (i.e. remote sensing and GIS) whenever possible, they will map the distribution of various human phenomena and look for spatial patterns that the maps reveal.

Standard 5: Students will analyze ways in which humans affect and are affected by their physical environment. *Standard 6:* Students will describe the influence of physical and human factors on the evolution of significant historic events and movements. They will apply the geographic viewpoint to local, regional, and world problems and problems.

Geography and History of the World

5.2: Describe, using maps, timelines, and/or other graphic presentations, the worldwide trend toward urbanization. Assess the impact of factors such as locational advantages and disadvantages, changing transportation technologies, population growth, changing agricultural production, and the demands of industry on this trend.

5.3: Analyze the changing functions of cities over time.

5.5: Analyze and assess the impact of urbanization on the physical and human environments in various parts of the world.

Earth Science

ES.1.25 Investigate and discuss the origin of various landforms, such as mountains and rivers, and how they are affected by human activities.

Materials Required:

- map of the United States with states and capitals
- colored pencils
- atlas
- road atlas
- computer lab with Internet access (web address--- www.nationalgeographic.com/xpeditions)
- copies of the handout

Objectives: Upon completion of this activity, the student will:

1. be familiar with the use of GIS for research,
2. be aware of the importance of rivers to cities,
3. analyze the placement of cities,
4. know the names of major rivers in the United States,
5. discuss the changing nature of land use in and around urban areas,
6. identify human and environment interaction issues of urban areas, and
7. be able to discuss the locational advantages (and disadvantages) of city placement.

Pre-activity work by the teacher:

Decide if you want your students to do all the states or some of the states

- * copy United States map needed
- * collect a number of road atlases
- * copy state list
- * schedule time in the computer lab for access to Internet research

Procedures:

1. Distribute map of United States with capitals indicated.
2. Distribute "Rivers and Capitals" worksheets to be completed.
3. Instruct students in procedures to complete the R&C worksheet.
4. Go to computer lab to allow students to conduct their research.
5. Give first address for students to use (<http://www.nationalgeographic.com>) click on "Maps", click on "expeditions Black and White maps." Go to the "select" box and start down the list of states. A map of each state will come up. Start at the top with Alabama and go to Wyoming. Check and see if the capital is on a river.
6. On the form fill in the capitals name.
7. Put a check mark if the capital is located on a river or on a body of water; write "no" if not on a river, or body of water.
8. Write the name of the river, or body of water, on which the capital is located.
9. Locate and label the river on the United States and capitals map by drawing the river on the map in blue.
10. After completing the list of states any capitals that were **not** shown to be on a river are to be looked up on a road atlas. If you now find the capital on a river, draw the river on the map in red.
11. Write a paragraph or two why you think so many of these capitals are on rivers.
12. Assign an international region to a group of 3 students (Eastern Europe, South-East Asia, Oceania, Central America...).
13. The students will conduct similar research about the location of major urban areas and their location in relation to a river or a body of water.
14. The small groups will create a map similar to that of the United States: countries, cities, body of water location and name.
15. The research from the small groups will be shared with the class and displayed for all to see.
16. Discuss the reasons "why" cities are (or are not) located near a body of water.
17. Discuss the concept of locational advantage (disadvantage). How does this concept relate to the previous work?
18. Each small group will, then, research the impact that the cities located on a body of water have on the surrounding environment (of the watershed). Or if the city is not located on a body of water, research the impact that the city has on the surrounding environment (mountains, deserts...).
19. The small groups will write a two page paper discussing consolidated ideas about the human/urban impact on the environment, citing their researched cities as examples. Sources are to be noted.

Adaptations/Extensions:

1. Give each student the City and State Population Chart. Using the website: <http://www.census.gov/>, they are to look up the populations of the states and capitals they are assigned---all or a few. Then calculate the % of the population that live in the capital.
2. Assign each student a number of states/countries/regions. They are to find other large cities in the state/countries/regions that are on rivers and name what rivers. Collect the population numbers of these other cities. Calculate the total population of these cities and work the % to the state/country/regional population.
3. Have students relocate a capital and justify "why" they relocated it "where".
4. Add a column to your list for the date the capital was founded. Discuss the transportation at the time of the founding of the capital or capitals.

Evaluation:

1. The accuracy and clarity of the map/maps.
2. Student comprehension of locational advantage/disadvantage and environmental impact through the short papers.

References:

1. <http://www.nationalgeographic.com>
2. Road Atlas/World Atlas
3. Population Reference Bureau (www.prb.org)

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# Rivers and Capitals

Name: \_\_\_\_\_

Class Period: \_\_\_\_\_

| <b>State</b>  | <b>Capital</b> | <b>River</b> | <b>Name River/body of water</b> |
|---------------|----------------|--------------|---------------------------------|
| Alabama       |                |              |                                 |
| Alaska        |                |              |                                 |
| Arizona       |                |              |                                 |
| Arkansas      |                |              |                                 |
| California    |                |              |                                 |
| Colorado      |                |              |                                 |
| Connecticut   |                |              |                                 |
| Delaware      |                |              |                                 |
| Florida       |                |              |                                 |
| Georgia       |                |              |                                 |
| Hawaii        |                |              |                                 |
| Idaho         |                |              |                                 |
| Illinois      |                |              |                                 |
| Indian        |                |              |                                 |
| Iowa          |                |              |                                 |
| Kansas        |                |              |                                 |
| Kentucky      |                |              |                                 |
| Louisiana     |                |              |                                 |
| Maine         |                |              |                                 |
| Maryland      |                |              |                                 |
| Massachusetts |                |              |                                 |
| Michigan      |                |              |                                 |
| Minnesota     |                |              |                                 |
| Mississippi   |                |              |                                 |
| Missouri      |                |              |                                 |
| Montana       |                |              |                                 |
| Nebraska      |                |              |                                 |

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Nevada

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New Hampshire

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New Jersey

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New Mexico

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New York

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North Carolina

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North Dakota

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Ohio

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Oklahoma

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Oregon

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Pennsylvania

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Rhode Island

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South Carolina

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South Dakota

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Tennessee

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Texas

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Utah

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Vermont

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Virginia

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Washington

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West

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Virginia

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Wisconsin

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Wyoming